Service Level Agreement (SLA)

Between

The Michigan Department Of Transportation

and

The Department of Information Technology

Change Notice No. 1

Duration of Agreement	
From: October 1, 2002	To: September 30, 2004

Nature of Change(s):

Effective immediately this SLA is hereby **EXTENDED** for one year. The new SLA end date is **September 30, 2005.** All other terms and conditions within the SLA remain the same.

Signatories	
Signed for and on behalf of: Department of Information Technology Name Teri Takai..... Signature..... Position...Director, Department of Information Technology Date.....1-19-05.....	Signed for and on behalf of: Michigan Department of Transportation Name.....Gloria J. Jeff..... Signature..... Position...Director, Department of Transportation Date.....1/6/05.....
Signed for and on behalf of: Department of Information Technology Name...C. Douglass Couto..... Signature..... Position... Agency Services Information Officer Date.....1-18-05.....	Signed for and on behalf of: Michigan Department of Transportation Name.....Leon Hank..... Signature..... Position...Chief Administrative Officer Date.....1/5/05.....

Service Level Agreement (SLA)

Service Level Agreement (SLA)

Duration of Agreement	
From:	To:

Signatories

Signed for and on behalf of *State of Michigan Department of Information Technology (DIT)*		Signed for and on behalf of *State of Michigan Department of Transportation (MDOT)*	
Name	Teri Takai	Name	Gloria J. Jeff
Signature		Signature	
Position	Director, Department of Information Technology	Position	Director, Michigan Department of Transportation
Date	10-1-03	Date	
Name	C. Douglass Couto	Name	Leon E. Hank
Signature		Signature	
Position	Information Officer for MDOT, Civil Rights, Civil Service, DMB, DIT Agency Services	Position	Chief Administrative Officer
Date		Date	

Service Level Agreement (SLA)

Service Level Agreement Revision Change Control

The Michigan Department Of Information Technology (DIT) is responsible for maintaining this Service Level Agreement (SLA) and will maintain the master soft copy of the SLA. When an initial version has been agreed, the following change management procedures will apply:

- The initial agreed version will be version 1.0.
- All subsequent amendments will receive a new version number.
- DIT will retain the master copy of the SLA.
- All changes to the SLA will result in a release of a revised SLA.
- All changes must be agreed upon and signed by both the MDOT SLA Manager and the DIT Transportation Agency Information Officer.
- All amendments will be summarized in the Revision History section of the SLA.
- The SLA will be reviewed by MDOT and DIT each fiscal year.
- MDOT and DIT will agree on limited, named, hard copy SLA holders.

Revision History

Version	Owner	Issue Date	Issued By	Description of Change

Addendum Material

Document Name	Version	Location	Owner
SLA Overview Document		Michigan.gov website	
DIT Services Catalog		Michigan.gov website	
Glossary of Terms		Michigan.gov website	
Problem Management and Escalation Process		Michigan.gov website	

Table of Contents

1.0 Purpose

This Service Level Agreement (SLA) has been jointly created by the Michigan Department of Transportation (MDOT) and the Department of Information Technology (DIT) to detail the conditions and expectations of our two organizations regarding the delivery of information technology services.

Specifically, this SLA defines:

- The IT services and products to be delivered.
- The standard of performance for each service that has been agreed between DIT and MDOT.
- Action plans to remedy potential problems.
- SLA roles and responsibilities.

This document consists of a number of Sections. Descriptions of the contents are included in the SLA Overview Document and an explanation of terminology is included in the Glossary of Terms Document.

Changes the SLA will be made as outlined in Section 3.0 Change Process.

2.0 Contact Information

The Transportation Agency Information Officer (IO) will be the primary representative from DIT managing and ensuring service delivery as identified in the SLA:

C. Douglass Couto
coutoc@michigan.gov

The Department of Transportation SLA Manager has been identified as the department's SLA Manager and will be the primary representative for negotiating service delivery and coordinating service delivery issue resolution with the IO:

Leon Hank
hankl@michigan.gov

3.0 Change and Review Process

Changes to this agreement may be negotiated based on changing business or service needs or significant variances from service commitments. Requests can be submitted to the IO or the Department's SLA Manager, and they will negotiate the changes. The changes must be agreed to by the Directors, or their designees, of both organizations.

This agreement will be reviewed by MDOT and MDIT each fiscal year.

4.0 Maintenance and Distribution of the Agreement

The DIT IO is responsible for maintaining this agreement and ensuring that changes have been incorporated, when appropriate, prior to distributions of new versions.

Distribution of copies within the Michigan Department of Transportation is the responsibility of the Department SLA Manager.

5.0 Problem Management and Escalation

The purpose of the problem management and escalation process is to manage service issues to ensure a consistent and high-quality response to customers. Should DIT fail to meet its expected level of service, MDOT and DIT should make efforts to resolve the problem themselves. If no solution can be found, MDOT is entitled to submit an issue and/or invoke the escalation procedure. The problem management and escalation procedure is as follows:

- MDOT will ask the appropriate Bureau Automation Manager to contact the Transportation Agency Director in writing. All further correspondence will show on a log to be tracked.
- In the event of failures, MDOT may withhold payment for disputed services while working with DIT's Information Officer to develop a resolution and, if necessary, a remediation plan. (However, MDOT will pay all invoice services not in dispute.)
- MDOT will retain the ability to set priorities for problems to be resolved.

5.1 Remediation

In the event of failures, MDOT will withhold payment for disputed services and will require a remediation plan from DIT. This document will detail the means and timeframe to ensure the ongoing achievement of normal service levels per the SLA. DIT will provide a remediation plan in the event that service levels are not met for two consecutive measurement periods or for three occurrences within a six-month period.

If the Information Officer and the SLA Manager fail to reach agreement about remediation, then the matter will be referred to the MDOT director and DIT director for resolution.

5.2 Termination

This agreement may be terminated upon the mutual agreement of DIT and MDOT.

6.0 Billing and Invoicing

The DIT services charges will be based on actual costs, which are deemed fully allowable and appropriately assigned or allocated to respective DIT services as required by OMB Circular A-87. DIT is in a transition period. As a service provider to State of Michigan agencies, the ultimate direction is to move to a fully-rated cost recovery model. Noted below are cost treatments and charge-back methodologies for DIT services for FY 2003.

Invoices must be paid within 30 days of receipt. If an item is disputed, the remaining invoice amount must be paid in full within 30 days of receipt. MDOT must notify the DIT Section Manager of DMB Fiscal Management Division and the Information Officer of disputed items within 10 days of receipt of invoice.

6.1 Direct Charges (DC)

MDOT will be charged for costs directly associated with the delivery of IT services. Examples include: direct agency assigned staff and agency specific procurement. In some instances there are staff who are working for multiple agencies in a non-rated service. Program managers will provide work distributions based on time reporting data for staff in these roles. Staffing costs will be charged to MDOT based on distribution percentages.

DIT will continue to maintain time statistics. Time statistics will be distributed to each Agency on a monthly basis, or as agreed upon by MDOT and DIT.

6.2 Program Administration (PA)

Program Administration (which includes divisional, sectional, and team administration) expenditures are costs incurred by program management in the delivery of IT services. An example of such cost is the Director of Agency Services. Costs incurred by the Director of Agency Services will be allocated to the MDOT as a function of Agency Services' direct salaries charged by Agency. PA will be allocated to the first-line staff through step-down allocations based on salary dollars.

DIT must:

- Provide audit capabilities that invoiced charges are appropriate and correct.
- Review and conduct an annual audit for all invoiced charges.
- Review computations and provide annual distributions for overhead and services.
- Provide cost methodology/cost allocation models and must use an independent party to provide cost allocation models.

6.3 Enterprise Administration (EA)

Enterprise Administration expenditures are costs incurred by the enterprise in overall delivery of IT services to the State of Michigan. EA includes costs such as DIT Director, Security and Disaster Recovery, and Research and Management Services. EA will be allocated as a function of total expenditures and will be applied to all DIT program services expenditures (including existing rated services areas) as well as to agency-specific procurement expenditures. These charges will not exceed allocations made for "Enterprise" expenditures. While EA will be initially distributed as a function of total expenditures, it is anticipated that in future years some EA expenditures may be allocated and charged to agencies on a functional basis rather than by dollars expended.

6.4 Rated Services

MDOT will continue to be charged for rated services such as Telecommunication data and voice networks, Data Center Services, Project Management, and Center for Geographic Information Services, etc. Rated services are charged based on usage for the specific service per published rate schedules.

6.5 Desktop Services

Desktop Services costs will ultimately be recovered through a rated structure. DIT will maintain an MDOT IT asset inventory to standards that will satisfy audits. Initially, however, desktop costs will be allocated to MDOT based on relative percentage of desktops. Where required, AR Remedy statistics may be used to aid MDOT in further distribution of desktop costs. (Note: Specific desktop purchases will be charged directly to MDOT and not allocated.)

$$\text{Desktop Services Total Costs} \times \frac{\text{Agency Desktop Count}}{\text{Total Desktop Count}} = \text{Agency Charge}$$

6.6 Distributed Processing (DP)

Distributed Processing services (local networks, servers, email, mainframe operations productions support, etc.) will be charged to MDOT based on direct assignment of staff. DP program administration will be allocated to first-line workers via step-down function based on salary dollars. MDOT will be charged all costs for on-site staff plus an overhead cost for their supervisor.

6.7 Enterprise Portal Costs

Enterprise Portal costs will be allocated to MDOT based on the number of times pages are accessed ("hits").

6.8 Rent

DIT recognizes that there may be instances during transition where DIT staff who are servicing multiple agencies may be housed with an area that heretofore had been dedicated to a single agency. MDOT will recommend a method for equitable allocation and "true-up" of these costs for treatment beginning with the FY04 billing cycle.

6.9 Annual Reconciliation

DIT will conduct an annual reconciliation of charges, or "true-up." This will involve a comparison of billed charges to the actual costs of providing those services. DIT may elect to refund any difference to customers through a final adjustment to billings. However, if differences are within reasonable levels, they may be carried forward as adjustments to future year's charges or rates as provided in OMB Circular A-87.

6.10 Meetings

DIT financial staff, in coordination with the MDOT's Information Officer, will meet on a regular basis with MDOT staff to review DIT invoices (invoices typically presented on a monthly basis) and identify and resolve any billing adjustments, omissions, and related issues that may be identified.

6.11 Spending Plan

DIT and MDOT will jointly develop an annual spending plan for the MDOT Inter-Department Grant (IDG). DIT financial staff will prepare and distribute a spending plan each month that annualizes expenditures, year-to-date, against the MDOT Inter-Department Grant. DIT financial staff, in coordination with MDOT's IO, will meet on a regular basis with MDOT staff to review the spending plan, identify funding shortages, and jointly prepare an action plan to spend within available resources.

Cost Efficiencies: DIT will take on re-engineering efforts to drive down cost and to improve efficiencies. As DIT realizes the benefits from these efforts, the deficit will be retired in the internal service fund.

6.12 Monthly Statements

Detailed billing statements will be provided on a monthly basis. The statements will include a detailed breakdown of charges within service categories and will be sufficiently detailed to allow MDOT to properly allocate expenses to the appropriate federal and state funding sources and projects to enable MDOT to be reimbursed for eligible expenses, to enable charges to be assigned to appropriate MDOT projects, and to ensure that all billed resources were expended in the provision of IT services to MDOT.

Performance metrics will be developed and made available on reports that accompan[redacted] included in, these billing statements.

7.0 Audit Clause

As part of this SLA, MDOT and DIT agree to this audit clause which provides that financial records, documents, data, accounting procedures and practices, programs, projects, information systems, or any other items of the service provided, deemed relevant to the SLA by MDOT and DIT, are subject to examination by the appropriate MDOT and DIT representatives. MDOT and DIT will, and will cause its subcontractors and suppliers to, provide to MDOT and DIT (and internal and external auditors, inspectors, regulators, and other representatives that MDOT and DIT may designate from time to time) access at reasonable hours to MDOT and DIT personnel, to the facilities at or from which services are then being provided and to MDOT and DIT records and other pertinent information, all to the extent relevant to the services and DIT's obligation. Such access will be provided for the purpose of performing audits and inspections. MDOT and DIT will provide any reasonable assistance requested by either party or their designee in conducting any such audit, including installing and operating audit software.

Following an audit, MDOT and DIT will conduct an exit conference with MDOT and DIT representatives. MDOT and DIT will meet to review each audit report promptly after the issuance thereof and MDOT and DIT will respond to each audit report in writing within thirty (30) days from receipt of such report, unless a shorter response time is specified in such report. MDOT and DIT will develop and agree upon an action plan to promptly address and resolve any deficiencies, concerns, and/or recommendations in such audit report and MDOT and DIT will undertake remedial action in accordance with such action plan and the dates specified therein.

- DIT will establish and maintain accurate records, in accordance with generally-accepted accounting principles, of all expenses incurred for which payment is sought or made under this agreement, said records to be hereinafter referred to as the "RECORDS." Record and present cost and progress reports to meet MDOT requirements.
- DIT will maintain the RECORDS for at least three (3) years from the date of final payment made to or by MDOT under this agreement. In the event of a dispute with regard to the allowable expenses or any other issue under this agreement, DIT will thereafter continue to maintain the RECORDS at least until that dispute has been finally decided and the time for all available challenges or appeals of that decision has expired.

- MDOT or its representative may inspect, copy, or audit the RECORDS at any reasonable time after giving reasonable notice.
- If any part of the work is subcontracted, DIT will assure compliance with subsections (a), (b), and (c) above and with applicable state and federal requirements for all subcontracted work.

In the event that an audit performed by or on behalf of MDOT indicates an adjustment to the costs reported under this agreement or questions the allowability of an item of expense, MDOT will promptly submit to DIT a Notice of Audit Results and a copy of the audit report, which may supplement or modify any tentative findings verbally communicated to DIT at the completion of the audit.

Within sixty (60) days after the date of the Notice of Audit Results, DIT will (a) respond in writing to the responsible Bureau of MDOT indicating whether or not it concurs with the audit report, (b) clearly explain the nature and basis for any disagreement as to a disallowed item of expense, and (c) submit to MDOT a written explanation as to any questioned or no opinion expressed item of expense, hereinafter referred to as the "RESPONSE." The RESPONSE will be clearly stated and will provide any supporting documentation necessary to resolve any disagreement or questioned or no opinion expressed item of expense. Where the documentation is voluminous, DIT may supply appropriate excerpts and make alternate arrangements to conveniently and reasonably make that documentation available for review by MDOT. The RESPONSE will refer to and apply the language of the agreement. DIT agrees that failure to submit a RESPONSE within the sixty (60) day period constitutes agreement with any disallowance of an item of expense and authorizes MDOT to finally disallow any items of questioned or no opinion expressed cost.

MDOT will make its decision with regard to any Notice of Audit Results and RESPONSE within one hundred twenty (120) days after the date of the Notice of Audit Results. If MDOT determines that an overpayment has been made to DIT, DIT will repay that amount to MDOT or reach agreement with MDOT on a repayment schedule within thirty (30) days after the date of an invoice from MDOT. If DIT fails to repay the overpayment or reach agreement with MDOT on a repayment schedule within the thirty (30) day period, DIT agrees that MDOT will deduct all or a portion of the overpayment from any funds then or thereafter payable by MDOT to DIT under this agreement or any other agreement.

MDIT shall prepare a detailed report, with recommendations and conclusions, including a list of service charges to the Michigan transportation fund, the appropriateness of those charges, and the cost allocation methodologies used in determining the level of funding, and any un-reimbursed costs.

8.0 Performance Reviews

Monthly (or as needed) reviews will be conducted with the SLA Manager to assess service effectiveness, address service problems, and evaluate service delivery in light of business needs and available resources. Particular attention will be paid to notable deviations from commitments.

This meeting will also review the status of current projects and identify and resolve issues and initiate needed action items.

As a basis for the review, the IO and the CAO will collaborate in collecting, analyzing, and reporting service data associated with the SLA, including detailed logs of service and performance, including documentation of problems, response times, times to resolution, and detail about the resolutions themselves. This review is generally delegated to the Bureau Automation Managers (BAMs).

DIT must also provide MDOT with a method for real-time monitoring of outstanding problems and a problem history.

The MDOT SLA Manager or a designated representative must attend all SLA Review Meetings.

A report describing project statuses, issues addressed, decisions made, and actions taken will be published within five (5) days of the review meeting.

This review will also include advice from DIT on technology options that have become available that could improve the overall level of service. This review will also serve as an opportunity to identify improvements in performance.

9.0 SLA Management Roles and Responsibilities

The following provides an understanding of the roles and responsibilities for DIT and MDOT in accordance to this SLA.

9.1 DIT shall

1) Be responsible for providing the qualified resources and skills to deliver the services purchased in a cost-effective and timely manner.
2) Communicate the methodology for pricing and the process for collecting fees and payments and obtain consensus on these.

3) Discuss with MDOT voluntary changes in staffing to ensure service continuity and will get MDOT concurrence on plan to maintain service levels. (Key resources will be defined through further discussion.)

4) Organize, facilitate, and attend meetings in order to meet service objectives and business demands.

5) Commit to teamwork and conflict resolution.

6) MDIT shall reserve the right to review and/or reassign DIT-related functions to MDOT staff based on mutual agreement and addressing funding and staffing requirements.

7) Communicate with MDOT to ensure that MDOT is adequately informed about DIT needs, requirements, and business directions. DIT must communicate with MDOT immediately if there are changes in program direction, IT operations, or IT personnel assignments that would impact MDOT business or business practices. New initiatives must be communicated to MDOT so that adequate preparation and procurement time is available to implement new or enhanced services.

8) Include MDOT SLA Manager in IT strategic planning activities, sponsor and executive review meetings and designate DIT managers supporting MDOT as ITOT members.

9) Work with MDOT to develop an IT spending plan.

10) Perform IT services upon receiving instructions to proceed from MDOT.

11) Perform all agreed to activities with regards to audits and record-keeping (See Section 6.0 (Billing) and Section 7.0 (Audits) for more detail).

12) Work with MDOT to establish authorization thresholds for contracts, projects, hardware, and software approvals.

13) Provide staff to work with MDOT teams and follow MDOT IT approval processes.

14) The DIT staff located at MDOT facilities will provide support at current levels. Changes in processes will be presented to the ITOT and CAO before implementation.

9.2 MDOT shall

1) Commit to teamwork and conflict resolution.

2) Communicate all issues and problems to DIT following the problem management and escalation procedures outline in this document and its associated attachments (See Section 3.0 (Change Process) and Section 5.0 (Problem Management and Escalation) for more detail).

3) Communicate with DIT to ensure that DIT is adequately informed about MDOT's needs, requirements, business directions, and personnel changes. MDOT must communicate with DIT immediately if there are changes in program direction. New initiatives must be

communicated to DIT so that adequate preparation and procurement time is available to implement new or enhanced services.

4) Include DIT Information Officer or an appropriate designee in strategic planning activities, management meetings, project steering committee meetings, and state transportation commission workshops.

5) MDOT shall reserve the right to review and/or reassign DIT-related functions to MDOT staff based on mutual agreement and addressing funding and staffing requirements.

6) Reserve the right to add, modify, prioritize, or delete projects which may or may not be included in the inter-department grant.

7) Work with DIT to develop an IT spending plan.

8) Review and approve billings and acceptance of completed work.

9) Make payment to DIT upon approval of billing and acceptance of completed work.

10) MDOT will provide adequate space for DIT staff located at MDOT sites when assigned to MDOT activities.

11) Include MDIT IO in IT strategic planning activities.

9.3 Further Agreements

It is further agreed that:

a) DIT errors or omissions causing rework may be at DIT's expense.

b) MDOT errors or omissions causing rework may be at MDOT's expense.

c) Source forms and data entry specifications may be changed, deleted, or added to this agreement.

d) Non-Disclosure – DIT employees will not disclose or reveal any software, documentation, data, or any information derived from data stored in MDOT databases without MDOT's express written permission.

e) Freedom of Information – MDOT will be responsible for complying with Freedom of Information requests involving data in databases owned by MDOT, but maintained by DIT.

i) DIT will deny any FOIA requests received that are the responsibility of MDOT, and refer the requestor to the appropriate MDOT contact.

ii) DIT will notify MDOT of requests received and rejected concerning MDOT behalf in a timely fashion.

f) Ownership — All software, documentation, and other materials developed under this agreement will be the property of MDOT.

10.0 Agency Support Services

10.1 Customer Summary of Service

Currently, MDOT purchases the following services from DIT. As part of this agreement, MDOT will continue to receive the listed services for Fiscal Year 2003, which will be billed according to the process recorded in Section 6.0 Billing and Invoicing of this document. Changes to these services will be made as outlined in Section 3.0 Change Process of this document.

- Voice Services
- Customer Service Center Services
- Desktop and User Support
- Data Network and Connectivity
- Data and Application Hosting
- Application Development and Maintenance
- Education and Training
- Security Services
- IT & Business Consulting Services
- Disaster Recovery and Business Resumption
- Procurement and Contract Management
- Radio Services and Radio Towers

The service levels and quality assurance processes currently in place in MDOT are documented in Appendix A. These service levels represent the minimum that DIT needs to provide to MDOT in terms of quality, responsiveness, and cost. DIT will continue to provide data about these services and additional metrics when developed.

10.2 New Systems Development

Application development requests will be submitted through the process developed by MDOT and the IO.

10.3 Application Maintenance and Support

Application Development and Maintenance Services include enhancement services and maintenance services. Enhancement services can be sub-divided as follows:

- Major Enhancements involve significant new requirements, but do not alter the overall makeup of an existing solution. This may entail adding, changing,

or deleting functions for the existing solution. Major enhancements will usually cause an impact to the business, organization, or architecture and may require significant cost, effort, and time to complete. Examples may include migration to a new application platform, adding new interfaces, or re-designing a database.

- Minor Enhancements involve adding new requirements against an existing solution, but have minimal impact on the business, organization, or architecture. Examples may include updates to data tables, updating a field on an HTML view, or updating a module that was originally changed via an emergency fix.

Maintenance can be sub-divided as follows:

- Corrective Maintenance includes work that is initially spawned by a problem incident report and is generally referred to as a "fix." Involves changes made to application code in support of new or changed system software. Cost and effort are relatively low. This work may be initiated to provide a complete fix after an emergency fix was performed.
- Emergency Fix is defined as the occurrence of a problem that must be addressed immediately, such as the disruption of a system or application. Urgent emergencies include life and death situations. High emergencies have public impact, significantly effecting a large number of users, or inability to meet deadlines for statutory payments. Medium emergencies include all other situations that have impact on users.
- Preventative Maintenance involves work that is initiated in order to avert foreseeable problems, improve performance, quality, reliability, efficiency, usability, or maintainability of an installed solution. Examples may be new reports or changes to existing reports.

DIT will be responsible for on-going system maintenance and enhancement, unless otherwise outsourced to a vendor, for the duration of this agreement. Should system maintenance and/or enhancement obligations impact the delivery of new systems, or resources not be available within the existing staffing structure, MDOT will be responsible for prioritizing maintenance and enhancement efforts.

10.4 MicroTech Support

DIT will work toward a stable field support staff familiar with MDOT by dedicating staff to MDOT who report to the Transportation Agency Administrator.

11.0 Critical Applications

A list of critical applications (with supporting infrastructure) will be developed along with required response times. Below are two examples:

- Bid XPress (electronic bidding system)
- MIPARS

12.0 Distributed Processing Operations

12.1 Overview

The Distributed Processing Operations (DPO) Division within DIT is responsible for the planning, design, engineering, and operations of all local area networks for the State of Michigan. DPO also offers server and application hosting services, e-mail service, file and print services, operating system support, maintenance support, and software and hardware technology refreshment services in a variety of different facilities in a distributed environment.

DPO services are typically provided on a 5 X 12 basis; however, MDOT has the option to extend coverage via an on-call service.

DPO also offers mainframe job scheduling, operations, and data entry services.

12.2 DPO Services

DPO provides the following types of services to Agencies:

Facilities Management	Network Management
Server Procurement	Job Scheduling/Execution
Server Software Installation	Maintenance Agreements (SW & HW)
Asset/Configuration Management	Server/HW Capacity Planning
Server Installation/Setup	Service Request Management
Server Backup/Recovery	Software Problem Management/Patch Process
Server Documentation	Print Services
Server Security	Operations Metrics/Utilization Reporting
User Profile Management	Application Server Support
Performance Tuning	Server Software Distribution
Server Monitoring and Corrective Action	Change Control
Performance Tuning	Software Version Control
Server Monitoring and Corrective Action	

12.3 DPO Monthly Costs

DPO charges for FY03 are costs directly associated with the delivery of the services listed above. These charges include three types of costs: Payroll, Program Administration, and Support Costs.

- Payroll consists of actual payroll charges for the pay periods ending during the invoice month. DPO staff is charged to an agency as dedicated to MDOT, allocated to MDOT, or based on a time distribution.
- Dedicated: Costs of DPO employees working full-time for a single agency.
- Allocated: Costs of supervisors and managers are allocated based on salary costs of employees in their reporting organization.
- Time Distribution: Some DPO employees provide services to multiple agencies. For these employees, their costs are distributed as a percentage or time worked for each agency.
- Program Administration (PA) expenditures are costs incurred by program management in the delivery of DPO services. An example of such cost is the Director of Distributed Processing Operations. Costs incurred by the Director of Distributed Processing Operations are allocated to agencies as a function of Agency Services' direct salaries. Support costs are expenditures such as travel, telephones, pagers, copier rental, office supplies, and other CSS&M related to the staff in the DPO organization.

13.0 IT Procurement

13.1 Overview

Contract & Procurement Services provides agency-specific and enterprise-wide procurement and contract management services for IT commodities and services. MAIN processing activities, vendor interaction, and State approval/reporting requirements are handled by DIT Contract & Procurement Services.

13.2 Contract Management Services

DIT Contract Management Services is responsible for processing all IT-related contractual service requests, and ensures that the services provided meet contract specifications. In serving these IT needs, DIT Contract Management Services include the following:

- Assist Agency in developing, renewing, and re-bundling IT contracts.
- Work with Agency and project managers in identifying IT needs and developing statements of work.

- Coordinate with DMB to determine most appropriate contract vehicle to obtain services.
- Develop contract language for Request for Proposal, Invitation to Big, and Sole Source contracts.
- Work with Department procurement and personnel staff to obtain Department of Civil Service approval, via CS-138, if needed.
- Participate in pre-bid meetings, oral presentations, and joint evaluation committee process and vendor selection.
- Review contractor's detailed work plan to ensure it will result in meeting the objectives and tasks stated in the contract.
- Act as liaison between Agency and Contractor in order to insure mutual understanding of the respective roles and responsibilities of the contractor and MDOT.
- Prepare contract portfolio and status reports to share with management staff regarding contract management and activity.
- Monitor contracts with existing vendors and make recommendations on extensions and renewals.
- Manage contract change requests.
- Monitor financial data for each contract to ensure that contract is on budget.
- Monitor all contract activity to ensure compliance with contractual obligations and DIT strategic direction.
- Leverage resources and create cost savings by establishing contracts using a best-practice, best-price, and best-value mindset.
- Promote proactive management of the IT contract portfolio through valued partnership and foster an enterprise-wide perspective.
- Coordinate funding approvals.
- Adhere to Executive Directives/Executive Orders, DIT and Agency-specific requirements in processing IT contractual service requests.
- Process approved agency contractual service requests in a timely and efficient manner.

13.3 Procurement Services

DIT Procurement Services covers the purchase of all non-delegated IT commodities and services for State agencies. Delegated services are those for which MDOT is specifically responsible.

The DIT Procurement Services Section performs all MAIN-related functions for IT procurements. These include requisitions, purchase orders, change orders, receivers, and cancellations. DIT Procurement Services will issue Agency-specific procurement requisitions in a designated MAIN ADPICS department number and route those documents for view and approval by the Transportation Agency, based on approval path information provided by MDOT. DIT Procurement Services will notify end users of request status throughout the procurement.

In serving the IT procurement needs of MDOT, DIT Procurement Services will:

- Adhere to Agency-specified approval requirements for IT purchases.
- Provide a variety of methods for Agencies to request the purchase of desktop commodities, including telephone requests, e-mail, fax, ID-mail requests.
- Process approved Agency procurement requests through appropriate DIT approvers in a timely and efficient manner.
- Check published on-hand stock status for items that can be re-deployed free of charge before procuring new items using Agency funds.
- Procure commodities that meet published enterprise standards.
- Use a variety of procurement methods, including the MAIN system and procurement cards, to purchase items at the most favorable cost and value.
- Notify MDOT of procurement request status.
- Notify MDOT of procurement methods used.
- If requested, use Agency-specific coding in selected fields of MAIN coding blocks to assist MDOT in reconciling its monthly invoice.
- Establish and maintain a MAIN ADPICS department approval path to route Agency-specific purchases for approval and viewing by Agency staff.
- Adhere to State Executive Directives and instructional memoranda regarding the approval, processing, and reporting of IT commodities.
- Expedite orders as quickly as administratively possible for urgent Agency requests.

- Coordinate procurement efforts with those of DIT Infrastructure Services, Agency Services, and Administrative Services to streamline receipt, delivery, and billing for commodities.
- Provide procurement contact names and instructional media to Agency staff regarding DIT procurement methods. If requested, meet with and train Agency staff on DIT procurement processes.
- Work cooperatively with DIT Infrastructure Services to maintain warranty and maintenance agreements for software and hardware serving MDOT.
- Strive to lower Agency costs for licensing and maintenance purchases by combining procurements for volume discounts.
- Process assigned invoices in a timely manner and work proactively with DMB Accounts Payable staff to ensure timely, accurate payment of vendor invoices.

13.4 MDOT will be responsible to

- Enter Account Code (AG3) information into requisitions in the appropriate DIT-15, if MDOT chooses to request AG3 coding for its IT purchases.
- For IT desktop commodity purchases, supply information identifying the end user's name, phone number, and physical location to assist in notification, delivery, installation, and inventory tracking.
- Participate in pre-bid meetings, oral presentations, and joint evaluation committee process and vendor selection.
- Provide DIT Procurement with current information on Agency-designated signatories and approvers for DIT-0015 (Procurement Request) documents and Customer Service Center Procurement requests.
- Indicate whether funding for each procurement request is included in the IDG.
- Comply with the requirements of the End User Computing freeze on desktop commodities by providing a business case for any desktop commodity request that includes some portion of general fund monies.

Charges to MDOT for Procurement Staff will be based on the percentage of transactions processed for MDOT by its designated procurement liaison(s) and related percentage of the supervisor and overhead costs.

14.0 Hardware, Software, and Projects Not Included in the IDG

MDOT may purchase IT commodities, software, and project development services after approval from DIT, using funding outside of the IDG.

15.0 Security Services

15.1 Security Services Overview

Security Services cover the development, maintenance, implementation, and enforcement of security-related policies and procedures for State Government IT resources.

It also includes incident management, monitoring, and interaction with non-State of Michigan security entities to insure that the State's IT infrastructure is safe from entities outside State Government as well as within State Government.

15.2 Scope

- Development of security-related policy and procedures.
- Coordination, implementation, and enforcement of all related security policies.
- Monitoring of security processes.

15.3 Security Services

Security Awareness and Assessment includes certain essential base services and certain premium services. Essential base services include:

- Development of guidelines and standards to meet state and federal security obligations and needs.
- Coordination of DIT Security agreement processes with agencies.
- Provide security-related tools, such as training materials, etc.
- Research new security technologies and make recommendations for new processes.

Premium services include:

- Coordination of Security with agencies, including awareness promotion: Work with agencies to promote security awareness.
- Enterprise Risk Assessment: Conduct enterprise-wide Rapid Risk Assessment.
- Assessment & Management of Application Risk:

- Assessment of application risk: Assist agencies in evaluating degree of security-related risk.
- Development of mitigation plans: Provide assistance to customers toward development of mitigation plans to address identified risks.

15.3.1 Passive Monitoring of IT Security Environment

This monitoring includes certain the following base essential services:

- Monitoring of State Firewalls
  - Provide oversight responsibility for the security of the State's infrastructure.
  - Provide final approval on firewall rule changes in accordance with State Standards and guidelines.
- Provide Security Alert Services
  - Monitor, evaluate, and publish industry security events and vulnerabilities to Agencies.
  - Provide network intrusion detection.
  - Monitor security breaches and provide information to agencies as warranted.
- Hardware Security Scanning Services
  - Coordinate scanning of systems within SOM for possible vulnerabilities.
  - Provide recommendations to resolve known vulnerabilities.
- Virus Protection
  - Coordination of virus protection, detection, and suppression at the PC, server, and network level.
- General Security Monitoring
  - Provide reports to agencies on security violations as well as policy infractions.
  - Provide services on DIT supported platforms.
  - Coordinating application of federal security programs, such as Homeland Security (focused on "all threats" approach).

15.3.2 Active Monitoring of IT Security Environment

This monitoring includes certain essential base services and certain premium services. Essential base services include:

- Perform IT Risk Assessment Services
  - Perform risk assessment of DIT infrastructure facilities in accordance with State policy and standards.

    - Perform on-demand risk assessment service, as needed within DIT for new or changing infrastructure facilities.
    - Document risk assessments for management review and response.
- Audits of Access Privileges
    - Audit access codes and usage on platforms within DIT based on Security policies and standards.
    - Provide information for coordination with customers on customer access rights and privileges.
    - Assist customers with agency audits relating to IT platforms/applications. This assistance may involve IRS audits, Auditor General audits, etc.
- Coordination of Physical Security for DIT Facilities.
- Health Information Portability Protection Act (HIPPA) - Ensure compliance with HIPPA regulations.

Premium services include:

- Ethical Hacking — Conduct ethical hacking against DIT platform resources to assist in determining level of risk for intrusion, firewall protection, and make recommendations on remediation strategies.
- User Monitoring — On-demand monitoring of users. In specific circumstances, it may be necessary to monitor specific users to address suspected illicit or fraudulent use of IT resources.
- Security Accreditation of Computer Systems Facilitate security accreditation and certification of computer systems.
- Formal Security Training / Awareness.
- Homeland Security Incident Coordination Issues/Response.

15.4 Disaster Recovery Services Overview

The Disaster Recovery and Emergency Management Services addresses DIT's responsibility regarding planning, developing, and executing disaster recovery capabilities.

These services also address offering assistance to MDOT toward development of their business resumption plan responsibility. DIT can leverage its disaster recovery planning expertise to provide assistance to its plans and processes. While both the development and execution of business resumption is clearly an agency responsibility, DIT will assist customers in dealing with this responsibility.

15.4.1 Scope

- Assist in the creation of disaster recovery plans and processes, and creation and maintenance of a disaster recovery hardware environment.

- Bring hardware and systems back online in the event of a disaster for critical application infrastructure.
- Assist toward development of business resumption plans and processes.

15.4.2 Disaster Recovery Services

The development and maintenance of a disaster recovery plan will include certain essential base services and certain premium services. Essential base services include:

- Maintenance of Disaster Recovery Plan — For critical business and DIT processes, creation of a disaster recovery plan covering:
  - Maintenance of existing disaster recovery plans.
  - Distribution of the disaster recovery plan.

Premium services include:

- Development of Disaster Recovery Plans — For critical business and DIT processes, creation of a disaster recovery plan covering:
  - Development of disaster recovery plans specific to each platform/process.
  - Distribution of the disaster recovery plan.

Testing of the disaster recovery plan will include certain essential base services and certain premium services. Essential base services include:

- Testing of Disaster Recovery Plan — Coordination of testing process with DIT infrastructure support and customer as required. This includes:
  - Testing of applications, network availability and output.
  - Ensuring that adequate Disaster Recovery testing is accomplished to meet customers' business requirements.

Premium Services include:

- "Table-Top" Testing Panel review of Disaster Recovery Plan to verify plan validity (content, information, sequence, etc.).
- Simulation Testing — Full-blown simulation of Disaster Recovery Plan execution to verify validity, completeness, and effectiveness.

Execution of the disaster recovery plan includes no essential base services but does include the following premium services:

- Declaration of an EMERGENCY Based on customer need and circumstance, DIT is responsible for the declaration of an emergency.
  - Provides 'over and above' normal business response for the specific systems or applications for which the emergency has been declared.

- Escalation to 7 X 24 coverage from on-call individuals.

15.4.3 Declaration of a Disaster

Based on customer need and circumstance, DIT is responsible for the declaration of a disaster.

15.4.4 Execution of Disaster Recovery Plans and Processes

Carry out efforts necessary to implement a Disaster Recovery effort based on the requirements defined in the Disaster Recovery plan to ensure that DIT Services meets pre-defined Agency Business Resumption Process requirements (may include the desktop, telecom, and distributed server environments).

- Re-establishment of infrastructure required to support business resumption.
- Re-establishment of data access.

15.4.5 Assistance toward Development of Business Resumption Plans and Processes

This assistance includes certain essential base services and certain other disaster recovery services. Essential base services include:

- Assistance to agencies toward development of their business resumption plans and processes.
- Coordination of business resumption planning process with DIT Infrastructure support, Agency Services, and Customer as required.
- Ensure that all infrastructure issues identified in the Business Resumption Process as being critical are involved in the development process (may include the desktop, telecom, and distributed server environments).

Other Disaster Recovery Services include:

- All other disaster recovery and assistance toward development of business resumption processes.

16.0 Enterprise Application Services

16.1 Overview

Enterprise Application Services provides application development and support for technical applications and services impacting several agencies and the enterprise (all agencies), including Human Resource Management Network (HRMN), DCDS, ADPICS, RSTARS, Michigan.gov, e-stores, Vignette, and Senior Project Management.

16.2 Michigan.gov

The Michigan.gov portal group provides hosting services including the production server environment and support at a 99.9% availability, and a test server, licenses, and support. Support Services for Michigan.gov include:

- Formal training and expertise in Vignette to all end users.
- Technical expertise in Vignette, Surfaid, and Inktomi for all technical resources.
- Graphical User Interface Michigan.gov Standard support (banner and graphics).
- State of Michigan web application monitoring and review for consistency in security, privacy, look and feel, and usability.
- Routine and on-request statistical reports.
- Web user interface design expertise and support of the user interface look and feel of the portal.
- Vignette Application maintenance and small enhancements.
- Maintain the contact Michigan e-mail box and either answer the e-mails or redirect them to MDOT or office that can best reply to the query.
- Support Governor's Executive Office and Communication Division with ongoing support for the Michigan.gov home page.

16.2.1 Billing and Funding

Michigan.gov Portal charges must support entirely the cost of the production and test hosting environments (now 88% of the cost) and the support services staff (now 12% of the cost). Total estimated annual expenses for the Michigan.gov portal is $4,081,000 distributed as follows:

Production and test hosting charges:	$3,586,000
Support Services Staff:	$ 495,000

Total estimated charges for MDOT for October 1, 2002 through September 30, 2003 are $261,540.00.

Agency charges are based on two factors – each weighted at 50%. These factors will be reviewed and adjusted annually:

- Content Count in Michigan.gov Database on 10/25/02 are representative of the cost of those servers, redundancy and support and the Vignette application.
- Page Views (end user traffic) 9/1/02 through 9/30/02 are representative of the cost of servers and support for Michigan.gov response time, availability, and redundancy.

Charges are not based on the number of websites per agency, the number of authors, editors, or publishers, or the number of training or support services.

16.3 Senior Project Manager Services

16.3.1 Obtaining Services

Contact your IO.

17.0 Desktop Services

17.1 Overview

This section details the services associated with the availability of 'ready-to-use' workstations, including standard or advanced workstations as well as associated peripherals, standard software, and applications.

It also covers the activities required to ensure that the workstations, peripherals, software, and applications provided are properly supported through their entire lifecycle.

17.2 Roles and Responsibilities

Desktop Services include:

- Availability of workstation & standard software, including standard configuration, software and basic office productivity, and State of Michigan software and applications.
- Availability of non-standard software, in answer to specific agency, position, or in some case individual needs.
- Model Office service, which ensures that any new application, software, or hardware is 100% compatible with existing standards & equipment.
- Moves, Adds, and Changes service, which deals with the installations, moving and/or removal of workstations and peripherals.
- Peripheral support, covers the on-site support for standard peripheral equipment.
- Kiosk support, similar to peripheral support but tailored specifically to the kiosks used by the agencies to provide services across the state.

17.3 Customer Service Center

As its name implies, the Customer Service Center essentially provides a portal to all DIT-related service areas via an Enterprise and Centralized Customer Service Center. The Customer Service Center covers the following:

- Single point of contact for any form of user support: (to obtain 'break & fix' support, to obtain information about DIT services, to procure new services from DIT such as applications hosting, etc.).
- Tier 1 user support with a stated goal of resolving the majority of support requests during the initial call ("on the spot").
- Tier 2 user support, when applicable, by drawing on other DIT services or Agency programs for final resolution of the issue.
- DIT will maintain the current MDOT Help Desk function until an orderly transition plan is presented to MDOT.

18.0 Center For Geographic Information (CGI)

18.1 Overview

The Center for Geographic Information (CGI) - - CGI provides leadership, technical expertise, and policy for the development, use, dissemination, promotion, and sharing of the state's geographic resources. CGI will provide maintenance, enhancement, and new development services to spatially-enabled multi-agency projects. Charges for CGI fall into two (2) categories: direct agency charges and services charged on an hourly basis.

18.2 Services

New Development projects and Enhancements to enterprise or multiple agency solutions are provided upon request by agencies. These services are billed based on the scope of work requested and the funding available by the requesting agency. A Memorandum of Understanding identifying the rates, work to be performed, responsibilities, and funding source, and approval will be developed and signed by the IO, the Director of the CGI, and the requesting agency. The billing rate will be an hourly rate for staff as follows:

Senior Staff:	$75 per hour
Junior Staff:	$60 per hour
Support Staff:	$35 per hour

18.2.1 Selected Services

Selected services includes certain Internet mapping services. Thinking and working geographically provides the advantages of using maps for decision support. Internet Mapping Services provide web tools to create maps, integrate information, visualize

scenarios, present powerful ideas, and develop effective solutions. Geographic Information Systems (GIS) on the Internet provides a much more dynamic tool than a static map display. Web-enabled GIS delivers interactive query capabilities such as:

- Searching for specific site locations.
- Displaying and viewing multiple data sets.
- Conducting queries for specialized analysis.
- Retrieving specialized data services.

CGI provides web-specific data development and management services targeting cartographic design and map rendering technologies; Internet Mapping Application development using pre-developed functionality or meeting new, agency-specific requirements; and IMS hosting services that include G-IT hardware and software maintenance with application versioning upgrades available.

18.2.2 Maintenance

CGI will provide maintenance services.

18.3 Project Management

Geographic Information Technology (G-IT) encompasses an understanding of spatial data, cartographic expertise, and a specifically-targeted family of software and its supporting architecture. Since 80% of State government information has a spatial component, the CGI offers agencies its G-IT expertise for reviewing proposals containing a geographic component and continuing project management services to ensure successful vendor delivery of G-IT requirements.

18.3.1 Product Development, Data Development, and Data Integration

CGI provides technical assistance and consultation services to Michigan's GIS user community, including:

- Standard and custom map products.
- Large-format printing for press conferences, court exhibits, and presentations.
- Database queries and tabular report compilation that reference geospatial data.
- Address (and other locational data) cleansing and address matching/geocoding services.
- Geospatial and related data conversion and migration.
- Custom geographic data development.
- Referencing system and map projection conversions.

- Two-way data integration between the Michigan Geographic Framework and various business data sources.

CGI also coordinates digital imagery acquisition and development. The CGI administers the State's geographic information web portal including maintenance of the Michigan Geographic Data Library providing access to several State agency-sponsored datasets.

18.3.4 Service Request Process

Contact your IO or the Director of Michigan Center for Geographic Information and Department of Information Technology at (517) 373-7910 for services.

19.0 Data Center Operations

19.1 Overview

Data and Application Hosting is the ability to provide mainframe/server facilities, Operating System support, maintenance, and operational monitoring of customer data and applications.

19.2 Data and Application Hosting

Data and application hosting can be performed either in a centralized or distributed environment, depending on the criticality of the data or applications hosted:

- Centralized hosting in a 7x24x365 data center is provided for data and those applications requiring high availability and/or a need for disaster recovery capabilities. It can also be preferred when a selected application resides on a mainframe or server supported by the data center.

20.0 Telecommunications

20.1 Overview

Telecommunications involves traditional voice (telephony) and data network backbone connectivity between State of Michigan work locations.

Voice Services addresses all services related to telephony, from basic office and cellular telephony to the design and deployment of elaborate Interactive Voice Response systems (IVR), Enhanced Call Processing (ECP), or Call Centers.

The breadth of Voice Services offered depends directly on the degree of involvement that DIT has in its delivery, i.e. whether or not the delivery facilities are managed by DIT rather than by an external service provider.

20.2 Service Levels

This translates into three (3) different levels in the breadth of Voice Services that are available to customers:

- For most central locations, or locations with a strong concentration of State of Michigan operations (specific buildings within the Lansing, Saginaw, Grand Rapids, and Detroit areas), DIT manages the voice installations and is accordingly able to offer its full breadth of Voice Services.
- For other locations with significant population or concentration of State of Michigan operations (specific buildings within Flint, Jackson, and Kalamazoo areas), DIT is able to offer a limited breadth of Voice Services.
- For all other locations, the role of DIT is currently limited to negotiating agreements with service providers to deliver the services on behalf of DIT.

Data & Network Connectivity covers the connectivity of users to standard State of Michigan data sources and applications such as data center applications, distributed applications, and external partners.

The Data & Network Connectivity Services are divided into the following services:

- Connection of a local network to the State of Michigan "backbone," which provides all users of this local network with access to the different data sources described above.
- Different remote connectivity modes, through which users working remotely are able to access their normal data resources.
- Different network services such as dedicated connectivity, connection to external partners, etc.

21.0 Radio Communication and Equipment

MDOT will reimburse DIT for costs associated with providing radio communication equipment and services.

Appendix A: Current IT Service Levels and Quality Assurance Processes

Executive Summary

The purpose of this document is to report the current IT service levels and the associated quality assurance processes within the Michigan Department of Transportation (MDOT). This report will then help to provide guidelines and baseline measurements for the Agency Operation Agreement (AOA) between MDOT and the Michigan Department of Information Technology (DIT).

This document will report the current IT service levels for the following critical infrastructure areas:

- Network, Communications, and Server
- Microtech Support
- Help Desk Support
- Web Services
- Database Administration
- CADD Development and Plotting
- Procurement and Contracting

Each of these infrastructure areas will be discussed further in the individual sections throughout the remainder of this document.

It is important to note, also, that the network, communications, and server infrastructure area acts as the backbone of MDOT IT and that all the other infrastructure areas are dependent upon it for functionality.

It is also crucial to note that care must be taken when scheduling maintenance or other activities that could affect the MDOT IT

infrastructure to ensure that MDOT's mission critical business processes are not shut down or adversely affected as a result.

Network, Communication, and Servers

A great deal of the work performed at MDOT is reliant upon access to the network, the communication opportunities offered by the network, and the servers which run the network. The customers who rely on network, communication, and server services include all MDOT employees and contractors at all MDOT facilities (including FHWA, MiPar users, counties, and transit agencies). All the other infrastructure areas of MDOT IT also rely on the network for functionality. Support for network, communication, and server services includes on-site visits to provide technical support for anyone doing business with MDOT.

Coverage and Response Times

During normal MDOT work days	• Coverage 7:00 AM to 6:00 PM (or later) • Onsite response time is immediate
During all other times (24, 7)	• Coverage is on call • Response time is two hours or less
Repair Time	• Usual repair time is to less than 30 minutes • A server is never to be down longer than to the next morning

Server Up Times

Server up times are currently measured and evaluated individually, meaning that no one server drops below the desired level of performance.

Up Time	• Current up time exceeds 99.9% • A server is never to be down longer than the next morning
For more information	• For more detailed information, see the section on Server Up Times.

Staff Expertise

Everyone on the self directed team responsible for maintenance for the network, communication, and server infrastructure area possesses certain skills and areas of expertise; most individuals on the team also have specific, more specialized areas of expertise. This expertise overlaps between individuals to provide redundancy that ensures continuous service.

Shared Skills	• Backup • Disaster recovery • Application development • Systems analysis and support • Server hardware/software installation • Server maintenance • Server support
Individuals' Proficiencies	• Sun Solaris administration, Oracle, DBA, and Sun Hardware

	• NT servers, NT workstations, NT & XP operating systems, NDS for NT, NT Domains, workstation backup, and active directory • Citrix, Web servers, proxy servers, NT servers, Linux servers, XP servers, NT workstations, IT Security, and Network monitoring. • Novell Netware, Novell GroupWise, NDS administration, and Switches • Novell Netware, Cisco routers, switches, Cisco remote access servers, security investigations, GPS and SyBase application development in a Novell Netware environment and Novell GroupWise • IT security, Cisco routers, switches, firewalls, Sun Solaris, Novell Netware, Novell GroupWise, capacity planning, computer room facilities, UPS systems and purchasing

Quality Assurance Processes

Maintenance and support of the network, communications, and server services is performed by a self-directed onsite team who perform the following duties:

- Maximize up time
- Forecast future (and changing) needs to be met
- Seek and research automation opportunities
- Budget hardware needs and monitor hardware inventories
- Research software
- Assist with end-user training
- Performance was evaluated by CIO

Microtech Support

The Microtech support team serves all current MDOT employees and authorized contractors at MDOT facilities. Their primary duties include installing hardware and software, supporting output devices, assisting individuals with use of hardware or software, solving hardware problems, running network cable, taking hardware inventory, managing hardware salvage and disposal, testing hardware and software, and procuring equipment.

Coverage and Response Times

During normal MDOT work days		• Coverage 7:00 AM to 5:00 PM • Average response time is seven minutes or less
During all other times (24, 7)		• Coverage is on call • Response time is two hours or less
Resolution times (within Lansing)		
	Blue screen	• 10 minutes – 1.5 hours • 30 minutes average
	Hard drive	• 1.5 hours – 8 hours • 4 hours average
	Floppy disk, CD, memory, power supply	• 10 minutes - 1 hour • 30 minutes average
	Network connectivity	• 5 minutes 4 hours • 1 hour average

Resolution times (field offices)		
	All services	• 4 hours average • No longer than the next business day (includes travel time)

Staff Expertise

Everyone on the Microtech support team shares the following duties:

- Install new computers
- Install all hardware peripherals
- Install software
- Trouble shoot and resolve hardware problems
- Trouble shoot and resolve software problems including desktop apps, MDOT apps, GroupWise, and NetWare
- Trouble shoot and resolve network connectivity
- Trouble shoot and resolve printer connectivity
- Set up network cabling for new offices
- With direction of Network/Server staff assist with installation and maintenance of servers
- Move computers
- Maintain and update the MDOT IT equipment inventory
- Negotiate with vendors for warranty and maintenance of hardware
- Provide one on one end user training
- Manage hardware salvage and disposal

In addition, other higher-level techs perform the following duties:

- Research new hardware and software
- Assist with setting up MDOT ghost images
- Assist with setting up MDOT automated software installs

- Write documentation
- Procure hardware/software that satisfy MDOT business needs
- Manage individual areas IT budget

Quality Assurance Processes

The following processes ensure that the Microtech support team can provide the levels of service reported earlier:

- Establish and manage the PC refresh rate and refresh schedules
- Perform annual and quarterly needs assessments
- Maintain an optimal level of spare PCs and repair parts
- Coordinate use with ITOT on weekly basis
- Manage supplier and customer relations
- Coordinate PC moves to accompany relocating staff
- Administer customer service surveys
- Gather and review performance statistics
- Resolve disputes

Help Desk Support

The MDOT Help Desk serves as their customers all MDOT employees (including authorized contractors at MDOT facilities), FHWA staff, MiPar users, and county and municipal transit agencies.

Coverage and Response Times

During normal MDOT work days	• Coverage 7:00 AM to 5:00 PM

Telephone Response Times	• Customer should have problem calls started within 60 seconds of the phone being answered • Phone should ring no more than three to four times before being transferred to voice mail • Voice mail messages answered within 15 minutes
E-mail	• Incoming messages must be replied to with a ticket number within 15 minutes
Fax	• Incoming messages must be responded to within 60 minutes

Staff Expertise

All Help Desk staff share a well-rounded knowledge of various IT issues pertinent to the requests received by the Help Desk. Most individuals on the team then also have specific, more specialized areas of expertise.

Individuals' areas of expertise	• Database questions • CTC-Bridge Administration • GroupWise • Corel Suite office software • Microsoft Suite office software • Hardware diagnosis • Dial-up networking

Quality Assurance

The following quality assurance processes are followed to ensure that the Help Desk staff is able to meet the service levels reported above:

- Statistics are provided to ITOT for quarterly review
- Performance was evaluated by CIO

Web Services

The Web Services team serves as their customers MDOT employees (including authorized contractors at MDOT facilities) and various entities that do business with MDOT (including contractors, county and municipal transit agencies, and the traveling public).

Because many business processes are dependent on MDOT's Web sites and because MDOT's Web sites are entirely dependent on the MDOT network, it is critical that planned maintenance be reviewed and approved by MDOT prior to commencing. Servers must have daily backups and proper recovery procedures to allow for rapid restoration of files, minimizing the disruption to service. Due to the critical nature of some data and services, processes must provide for immediate response rather than a long, ticket-based procedure with multiple approval points.

Coverage and Response Times

During normal work hours	• Server and service incidents receive immediate response
Other times (24, 7)	• Response within one hour

Staff Expertise

All Web staff share certain knowledge pertaining to the creation and upkeep of MDOT's Web site(s). Most individuals on the team then also have specific, more specialized areas of expertise.

Individuals' areas of expertise	• Vignette Content Manager Application (CMA) administration • CMA authors and editors • Web/intranet application developers • Web/intranet site designers

Database Administration

The MDOT Database Administration staff (DBAs) serve as their customer anyone who needs access to any of MDOT's infrastructure databases, including all MDOT employees (including authorized contractors at MDOT facilities) and county and municipal transit agencies.

It is important that all planned database maintenance, software upgrades, and patch installations take place after hours or on weekends on both development and production databases with prior notification given to all affected users and developers. It is also crucial that no maintenance or software upgrades/installations be initiated when MDOT is conducting mission critical business events (such as bid lettings). MDOT can provide dates for these mission critical business events.

Database administration is also heavily reliant upon the availability of the UNIX servers where databases reside and on tape backups being completed successfully, labeled, and stored in appropriate retention. Any UNIX availability that is less than 100% will directly impede the

DBAs ability to resolve problems. See the section on Database Administration Environment Conditions for a list of conditions that must be present for the database administration team to provide the service levels described below.

Coverage and Response Times

During normal work hours	• Coverage 7:30 AM 5:00 PM • Onsite response is immediate
During all other times (24, 7)	• Coverage on on-call basis, by-case basis (prior approval by database group for on-call hours required) • When approval granted, response time is two hours or less
Resolution times (emergency recoveries)	• Emergency recoveries completed in one day or less • No database is to be down longer than until the next morning
Minor recoveries	• Resolution time is one hour or less • An example of a minor recovery situation would be a corrupted control file
Major recoveries	• Resolution time is one to eight hours • An example of a major recovery situation would be a corrupted data file • Major recoveries are dependent on the success of tape backups

Catastrophic recoveries	• Resolution time is four to 12 hours • An example of a catastrophic recovery situation would be the complete loss of the UNIX server where the database resides • Catastrophic recoveries are dependent on the repair of the UNIX server and usually involve copying everything from tape backup to recover the database(s)
Resolution times (non-emergency recoveries)	• Non-emergency recoveries completed in two days or less • An example of a non-emergency recovery would be data corrupted by user through the application (where the database itself remains functional) • Other non-emergency recoveries often involve data corrupted by a logic error in the application that requires restoration from a previous backup — such situations are thus dependent on successful backups • Users must identify a deadline for recovery
IMPORTANT	• All recovery abilities are highly dependent on the UNIX servers being functional with all disk arrays available • All recovery abilities are also highly dependent on successful tape backups having been performed and the backups being properly labeled and stored

Schema maintenance	• 30 minutes to several hours • Examples of system recovery situations include tablespace extensions, re-creation of indexes, and compilation of functions, stored procedures, and triggers that are invalid where production database itself remains functional but an individual system within the database is down due to an Oracle construct • Goal is to have system recovery within one hour
Database maintenance	• Database trace files and any errors listed in alert logs will be researched and responded to within 24 hours
System promotion	• Application system promotion to production is assumed to be a non-emergency request • Promotion consultation will be initiated within one business day

Up Times

During normal work hours	• 97% availability 7:30 AM – 5:00 PM, Monday - Friday • 99.5% up time for each Oracle database over the past two broadbanding periods • Current service level on production Oracle databases 99.9997% up time

Quality Assurance Processes

- Consult on promoting databases to production
- Research inefficiencies in production databases, notify managing group, and consult on tuning to increase efficiency
- Requests for changes to databases are submitted via the Change Request Form system (CRF) or the Customer Service Request system (CRS) and will be completed by a mutually-agreed date.
- All technical requirement documentation is submitted and reviewed by the database team before final sign-off.

CADD Development & Plotting

The CADD Development & Plotting team serves statewide MDOT CADD & Engineering IT users. Their primary duties include configuring CADD workstations, installing CADD related hardware and software, management and support of plotting, manage select server CADD licensing, testing CADD/Plotting software, development of custom CADD programming, maintenance of CADD custom program and Plotting/CADD user support. This team also develops, supports and maintains many Engineering applications developed in house including; P/PMS Web Reporting, Bridge Autodraw, Quantities Database (QDB), Continuous Operating Reference Stations (CORS) Website, Consultant Accounting System (ACCESS), Design Plan Evaluation (DPE) System, and Survey Request Management System.

Coverage and Response Times

During normal work hours	• Coverage 7:00 AM – 4:30 PM • Onsite response is immediate

	• Plotter room staffed 7:00 AM 4:30 PM
Plotter Response	• Respond to customers within 4 business day hour of receipt of printing problem • Solve problem within 1 working day. If longer duration is necessary contact MDOT business manager for exception. • Plots trimmed, assembled and shelved within ½ business day hour of plot completion. • Route plot queues when needed due to overload or network failures
CADD Response	• Respond to customers within 4 business day hour of receipt of problem. • Solve problem within 1 working day. If longer duration is necessary contact MDOT business manager for exception.
Application Response	• Respond to customers within 4 business day hour of receipt of problem • Solve problem within 1 working day. If longer duration is necessary contact MDOT business manager for exception. • Develop applications as requested by business areas in a timely manner.

Up Times

Interplot Servers	• Exceed 98% up time on each Interplot Server

Bentley Select Server	• Exceed 98% up time on each Bentley Select License Server
Applications	• Exceed 98% up time on supported applications. • Notify DIT of application failures that are due to Server problems to ensure a quick resolution.

Staff Expertise

All Cadd Development & Plotting staff have a well-rounded knowledge of various Engineering IT and CADD software. Most individuals on the team then also have specific, more specialized areas of expertise.

Shared Skills	• CADD Experience • Database Development • Application development • Hardware/software installation • Web Development • Basic Plotting Knowledge
Individuals' Proficiencies	• Plotting through IPlot • Plot Server Management • Cold Fusion Development • C++ Programming • Visual Basic Programming • GIS • Raster Imaging

Quality Assurance Processes

Maintenance and support of the network, communications, and server services is performed by a self-directed onsite team who perform the following duties:

- Investigate new plotting technology to improve performance
- Test new printing/plotting devices for use with Microstation and Interplot software
- Test Microstation upgrades
- Document developed applications
- Provide reports on plotting and license usage
- Report on help desk activities
- Route plot queues for efficiency
- Report on up time of servers and applications above
- Document application development schedules

Procurement and Contracting

MDOT relies heavily on IT to accomplish its objectives. Timely Procurement and Contracting with minimal burden on requestors is essential to MDOT business. Sufficient communication must exist between MDIT and MDOT so that items are correctly procured the first time. Additionally there should be adequate checks built into the process to ensure that procured items will function in MDOT's IT environment. Sufficient expertise in IT contacting must be provided to MDOT so that issues are identified early in the process before it is too late to make deadlines and to eliminate rework. Delays in contracting cause a considerable amount of stress and un-necessary work to keep business functioning.

Procurement

Service	• P-Card Order approved and Purchased within 10 hours of form submittal to DIT • If DIT determines that the item is not a P-Card Purchase notifies requestor and works out a solution • P.O. items approved and purchased within 3 business days of form submittal to DIT. • Remedy # & P.O. # (if applicable) is supplied to requestor • Requester is notified when purchase is made • Requester is notified of estimated delivery date • Requestor notified of final price of P-card or P.O. • P.O. Change Notice must be communicated back to requestor within 1 business day. Approval of change by requestor is to be given within 1 business day of receipt. P.O. then updated and submitted within 1 business day of approval. • Packing slip returned to DIT within 5 business days of receipt
Quality Control	• Establish method for Requestor to get item status without having to contact DIT Buyer directly that can also be used for performance metrics • For purchase of software licenses DIT must send confirmation of license purchase. (in cases where software is distributed electronically with no hard deliverable)

	• If improper item was shipped it will be the responsibility of MDIT to correct the situation

Contracting

Service	• DIT contracting shall give the requestor a deadline for submittal that ensures meeting the proposed contract start date. • MDOT requestor will submit the contract information on or before the deadline with necessary MDOT approvals included. • MDIT has 5 business days to review the information and notify the requestor of any changes or additional information needed. • Changes or additions are provided by the requestor within 5 business days. • DIT will manage the process to ensure contract meets the proposed start date.
Quality Control	• DIT contracting will give biweekly status updates to the requestor. • DIT contacting will notify requestor of any events that jeopardize having the contract in place by the proposed start date. • DIT will be held accountable for any delays past the proposed start date. • DIT contracting liaisons should be

sufficiently trained and experienced with MDOT Commission Audit, DIT and DMB contracting procedures and requirements. Deficiencies in the contract documents must be identified early before they become a problem.

Database Administration Environment Conditions

The following conditions must exist within the IT environment for the DBAs to provide the service levels described in the Database Administration section.

1. UNIX resources must be available to resolve issues, provide backup tapes when necessary, and ensure adequate availability of UNIX machines. When requested, additional space and CPUs must be available in a timely manner.

   If a UNIX machine is available for less than 100% of the time, Oracle database availability will be directly impeded.

2. Adequate and appropriate software will be acquired. The database team uses several third-party software packages to monitor / access the Oracle databases. Examples include Xceed for Windows and Quest products.

3. Tape backups. The database tape backups must be completed successfully, properly labeled, and stored with appropriate retention by the Infrastructure group.

4. The network must be up and running efficient to ensure that recoveries and performance are optimal. The agency should have an infrastructure in place which is equivalent to what we

have today (i.e. Citrix, network, UNIX). The technology must stay current with the agency's needs and the industry.

5. Adequate compensation for off-hour work and over time must be defined ahead of time.

6. Adequate staffing with appropriate skills must be provided to the database team for the projected workload (for example, the Data Core contract affects our resources).

7. Adequate training and education should be place for database administration support staff. Current level of skill must be maintained through ongoing education and training.

8. Oracle contract issues must be taken care of at a corporate level. The support bills must be paid in a timely fashion or it will affect the level of service provided by Oracle Corporation which will directly impact our service level to the agency. 24-hour, seven-day support through Oracle Corp must be maintained.

9. Data Administration functions must be performed by the Data Administrator. (This function is external to the database administration team.)

10. Management will provide a list to identify which mission critical applications and which databases is a priority. If several systems are down, the agency will identify the priority in restoring them.

11. The Database Developer (DBD) / developer must be available to address issues.

12. The System Administrators need to communicate to us if any users are working outside of defined business hours. If we need to do database maintenance, no one can be on the

database. We need notice as soon as a conflict is identified and 48 hours before the scheduled maintenance.

13. All agency systems must provide us with and maintain a list of system administrators.

14. Database maintenance may be done outside working hours.

15. All changes to distributed databases (such as MAP) must first be reviewed, approved, and tested by all affected systems prior to the involvement of the database group. In the case of MAP database changes, all procedures and policies set forth by the MAP Data Team will be adhered to by any system requesting MAP database changes. The MAP Data Team is responsible for ensuring compliance by all affected systems.

Server Up Times

This report was generated on 10/16/2002 at 5:00 PM and describes uptime percentage from 10/16/2001 through 10/15/2002:

Server	Up Time
MDOT1	99.99314 %
MDOT2	99.99886 %
MDOT201	99.9859 %
MDOT202	100 %
MDOT251	99.99357 %
MDOT251 - COLD FUSION	99.99771 %
MDOT253	99.99514 %
MDOT255	100 %
MDOT256	99.9891 %
MDOT256 - COLD FUSION	99.98554 %
MDOT258	99.99445 %
MDOT258 - HTTPS	100 %
MDOT259	99.99947 %
MDOT260	99.98624 %
MDOT262	99.99901 %
MDOT3	99.99894 %
MDOT4	99.96574 %

Server	Up Time
MDOT5	99.99943 %
MDOT6	99.96648 %
MDOT9	99.99943 %
MDOTBBS1	100 %
MDOTDA	99.99886 %
MDOTEASPROD1	99.99732 %
MDOTFB	100 %
MDOTWARDEN1	99.99423 %
MDOTWARDEN2	99.99891 %
MDOT_APPS	99.99956 %
MDOT_BACKUP	99.94906 %
MDOT_CS1	99.99916 %
MDOT_CS2	99.99795 %
MDOT_CS3	99.99916 %
MDOT_FAX	99.99861 %
MDOT_GPS_NOAA	99.99467 %
MDOT_GW	99.99608 %
MDOT_GW2	99.99948 %
MDOT_HOME	100 %
MDOT_IP1	100 %
MDOT_IP2	100 %
MDOT_MBA	99.94373 %

Server	Up Time
MICHTRANS1	99.99978 %
MICHTRANS3	99.99459 %
MICHTRANS4	99.99982 %
MICHTRANS5	99.99943 %
MICHTRANS6	99.99987 %
MICHTRANS7	100 %
MICHTRANS8	100 %
MICHTRANS_AERO	100 %
MICHTRANS_ALLENPARK	99.99237 %
MICHTRANS_ALPENA	99.99698 %
MICHTRANS_BAYCITY	99.99545 %
MICHTRANS_BRIGHTON	99.98254 %
MICHTRANS_BWB	99.99862 %
MICHTRANS_CADILLAC	99.99856 %
MICHTRANS_CASSCITY	99.99644 %
MICHTRANS_COLOMA	99.98961 %
MICHTRANS_CRYSTALFALLS	99.99827 %
MICHTRANS_DAVISON	99.99477 %
MICHTRANS_DETROIT	99.99964 %
MICHTRANS_ESCANABA	100 %
MICHTRANS_GAYLORD	100 %
MICHTRANS_GRANDRAPIDS	99.99735 %

Server	Up Time
MICHTRANS_GRAYLING	99.99638 %
MICHTRANS_HOWARDCITY	99.99853 %
MICHTRANS_IBA	99.99511 %
MICHTRANS_ISHPEMING	99.63894 %
MICHTRANS_JACKSON	99.99907 %
MICHTRANS_JACKSON_TSC	99.99905 %
MICHTRANS_KALAMAZOO	99.99906 %
MICHTRANS_KALAMAZOO_GARAGE	99.99384 %
MICHTRANS_KALAMAZOO_SPCREWS	99.99959 %
MICHTRANS_LANSING	99.99859 %
MICHTRANS_MACOMB	100 %
MICHTRANS_MAINTENANCE	100 %
MICHTRANS_MARSHALL	100 %
MICHTRANS_METRO	99.78765 %
MICHTRANS_MITS	99.98505 %
MICHTRANS_MT	99.99539 %
MICHTRANS_MTPLEASANT	100 %
MICHTRANS_MUSKEGON	99.99902 %
MICHTRANS_NEWBERRY	99.99522 %
MICHTRANS_OAKLAND	99.96298 %
MICHTRANS_OAKPARK	99.99768 %
MICHTRANS_PAWPAW	99.98639 %

Server	Up Time
MICHTRANS_PHOTO	99.99927 %
MICHTRANS_PORTHURON	99.99957 %
MICHTRANS_SAGINAW	99.99952 %
MICHTRANS_SAGINAW_SPCREWS	99.99885 %
MICHTRANS_STERLING	99.99631 %
MICHTRANS_TAYLOR	99.99802 %
MICHTRANS_TECUMSEH	99.97198 %
MICHTRANS_TRAVERSE	100 %
MICHTRANS_WAREHOUSE	99.28944 %